



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,134	02/28/2002	Dana Le	12587-018001	4392

26212 7590 02/19/2004

FISH & RICHARDSON P.C.  
45 ROCKEFELLER PLAZA, SUITE 2800  
NEW YORK, NY 10111

EXAMINER

CHANG, YEAN HSI

ART UNIT	PAPER NUMBER
----------	--------------

2835

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/087,134

Applicant(s)

LE ET AL.

Examiner

Yean-Hsi Chang

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's request for reconsideration of the response to arguments of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. New office action is as follows.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-7, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kishida et al. (US 2002/0015008 A1).

Kishida teaches a wearable computer system (1 and 2, fig. 2) having an audio-only mode of operation (24, fig. 3), comprising:

- A computer unit (1, fig. 2B) wearable by a user (claim 1)
- A user interface (claim 1) comprising:

- An audio receiver (25, fig. 2B) wearable by the user and connectable to the computer unit (shown in fig. 2B)
  - A speaker (26, fig. 2B) adapted to be worn by the user and connectable to the computer unit (shown in fig. 2B)
  - An audio filter (27, fig. 3; also see page 3, paragraph [0045]) that filters audio signals received by the audio receiver that do not originate with the user (claim 3)
  - A second audio receiver (Microphone, fig. 7) connected to the wearable computer which includes a processor (411, fig. 7) and a computer memory (412, fig. 7) (claims 4-6)
  - An image recorder (602, fig. 15) adapted to be worn by the user and connectable to the computer unit such that the image recorder may capture an image and forward the image to the computer unit for storage (see page 5, paragraph [0075]) (claim 7)
  - Wherein the user display further includes a video display (100, fig. 2B) (claim 9)
4. Claims 18-19 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kishida et al.

Kishida teaches a wearable computer system (1 and 2, fig. 2) comprising:

- A first audio receiver (25, fig. 2B) wearable by a user (claim 18)
- A computer unit (1, fig. 2B) comprising:

- A circuitry (414, fig. 7) that receives and digitizes the electrical signal from the user (claim 18)
- A processor (411, fig. 7) (claim 18)
- A computer memory (412, fig. 7) (claim 18)
- A speaker (26, fig. 2B) adapted to be worn by the user and connectable to the computer unit (shown in fig. 2B) (claim 19)
- An audio filter (27, fig. 3; also see page 3, paragraph [0045]) that filters audio signals received by the audio receiver that do not originate with the user (claim 21)

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishida et al. in view of Anderson (US 5,721,783).

Kishida discloses the claimed invention except an earpiece housing the audio receiver and the speaker.

Anderson teaches an earpiece (10, fig. 1) housing an audio receiver (12, fig. 1) and a speaker (15, fig. 1) and being hidden in the ear canal.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kishida with the earpiece taught by Anderson so that both the audio receiver and the speaker can be hidden in the ear canal for a natural appearance.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishida et al. in view of Abbott et al. (US 2002/0087525 A1).

Kishida discloses the claimed invention except the computer unit including a GPS sensor.

Abbott teaches a wearable computer unit (106, fig. 2) comprising a GPS sensor (164, fig. 2; also see page 2, paragraph [0029]) for providing information of locations.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kishida with the GPS sensor taught by Abbott for providing information of locations.

8. Claims 10-11, 13-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kishida et al.

Kishida teaches a wearable computer system (1 and 2, fig. 2) comprising:

- A computer unit (1, fig. 2B) wearable by a user (claim 10)
- A user interface having an audio-only mode of operation (24, fig. 3),  
comprising:

- A first audio receiver (25, fig. 2B) wearable by the user and connectable to the computer unit (shown in fig. 2B) (claim 10)
- A speaker (26, fig. 2B) adapted to be worn by the user and connectable to the computer unit (shown in fig. 2B) (claim 11)
- A processor (11, fig. 1) and a computer memory (12, fig. 1) (claim 13)
- An audio filter (27, fig. 3; also see page 3, paragraph [0045]) that filters audio signals received by the audio receiver that do not originate with the user (claims 10 and 14)
- An image recorder (602, fig. 15) adapted to be worn by the user and connectable to the computer unit such that the image recorder may capture an image and forward the image to the computer unit for storage (see page 5, paragraph [0075]) (claim 15)
- Wherein the user display further includes a video display (100, fig. 2B) (claim 17)

Kishida discloses the claimed invention except a second audio receiver adapted to be worn by the user and connected to the computer unit (claim 12). However, Kishida teaches a second audio receiver (Microphone, fig. 7) connected to the wearable computer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the computer unit by indicating the I/O (14, fig. 3) being connected to a second audio receiver as shown in fig. 7 for the purpose of receiving audio signals from user's surroundings.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishida et al. in view of Anderson.

Kishida discloses the claimed invention except an earpiece housing the audio receiver and the speaker.

Anderson teaches an earpiece (10, fig. 1) housing an audio receiver (12, fig. 1) and a speaker (15, fig. 1) and being hidden in the ear canal.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kishida with the earpiece taught by Anderson so that both the audio receiver and the speaker can be hidden in the ear canal for a natural appearance.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishida et al. in view of Abbott et al.

Kishida discloses the claimed invention except the computer unit including a GPS sensor.

Abbott teaches a wearable computer unit (106, fig. 2) comprising a GPS sensor (164, fig. 2; also see page 2, paragraph [0029]) for providing information of locations.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kishida with the GPS sensor taught by Abbott for providing information of locations.



11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishida et al. in view of Anderson.

Kishida discloses the claimed invention except an earpiece housing the audio receiver and the speaker.

Anderson teaches an earpiece (10, fig. 1) housing an audio receiver (12, fig. 1) and a speaker (15, fig. 1) and being hidden in the ear canal.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kishida with the earpiece taught by Anderson so that both the audio receiver and the speaker can be hidden in the ear canal for a natural appearance.

12. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishida et al.

Kishida discloses the claimed invention except a second audio receiver adapted to be worn by the user and connected to the computer unit. However, Kishida teaches a second audio receiver (Microphone, fig. 7) connected to the wearable computer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the computer unit by indicating the I/O (14, fig. 3) being connected to a second audio receiver as shown in fig. 7 for the purpose of receiving audio signals from user's surroundings.

13. Claims 23, 27-29, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al. in view of Mitchell et al. (US 6,356,437 B1).

Abbott teaches a wearable computer system (106, fig. 2) comprising:

- A computer unit (166, fig. 2) wearable by a user, comprising:
  - A scrolling buffer (172, fig. 2) for storing input audio information (claim 29)
  - A memory (174, fig. 2) (claim 29)
  - A circuitry (170, fig. 2) that processes the input audio information by command from the user (claim 29)
- A first and second audio receivers (a microphone 162 and environment sensor 164, fig. 2; also see page 2, paragraphs [0028] and [0029]) wearable by a user and connected to the computer unit (claim 29)

Abbott fails to teach the first audio receiver being used for receiving voice command from the user. However, Mitchell teaches a first audio receiver (116, fig. 1) being used for giving natural voice command (see col. 8, lines 57-61, and col. 9, lines 32-35)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abbott by the first audio receiver taught by Mitchell so that natural voice command can be used to control the system when hands-free is necessary.

A method (claimed in claims 23 and 27-28) of operating the wearable computer system discussed hereinabove, is obviously disclosed in Abbott in view of Mitchell.

14. Claims 24-26, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abbott et al. in view of Mitchell et al., further in view of Strub et al. (US 6,563,532 B1).

Abbott in view of Mitchell discloses the claimed invention except the audio information stored in memory for later retrieval being received during a predetermined period of time immediately preceding, after, or both before and after receipt of the predetermined voice command.

Strubb teaches a wearable computer (300, fig. 3) comprising control interface device (308, fig. 3) being able to receive voice commands (see col. 59, lines 24-35), a system controller (301, fig. 3) controlling the operation an audio information input (303, fig. 3) and audio information memory (307, fig. 3) for later retrieval (see col. 11, line 15 through col. 12, line 15; col. 21, lines 24-38; col. 35, lines 12-35; col. 45, and lines 9-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abbott modified by Mitchell with the audio information operation controlling strategy so to increase the capability and the flexibility of the system.

### ***Response to Arguments***

15. Applicant's arguments filed Nov. 10, 2003 have been fully considered but they are not persuasive.

Applicant argues, "Kishida does not disclose a wearable computer system having a user interface having an audio-only mode of operation." Referring to figs.3 and 7, user interfaces 24 and 414 have an audio-only mode of operation.

Applicant also argues, "Kishida does not disclose the audio signals received by the first audio receiver that do not originate with the user are filtered with an audio filter." Referring to page 3, [0045] of Kishida, it states, "The control section 27 recognizes a voice signal input from the microphone". Anyone having ordinary skill in the art would understand it not only selects (filters) but also understands the voice signals.

Regarding claims 18-22, applicant argues, "Kishida does not disclose the use of a predetermined natural voice command that blends with the natural phrases and terminology spoken by the user, as is required by claim 18. More specifically, claim 18 requires that the claimed instructions stored in the claimed memory include instructions that, when executed by the processor, determines whether the recognized spoken words constitute a predetermined natural voice command that blends with the natural phrases and terminology commonly spoken by the user." All of the structural elements in the claims are found in the Kishida reference. The specific method limitations described within the claims are given little patentable weight absent any evidence that they impart a specific structure on the apparatus. Since this does not appear to be the case, the claims are found to be met by the reference.

Regarding claims 23-28, it claims a method of storing audio information received by a microphone, and retrieved at a later time; and regarding claims 29-34, it claims a wearable computer for recognition of voice command. All the features and functions

are clearly stated in paragraphs 13 and 14, hereinabove. The arguments in the remarks filed Nov. 10, 2003, is nothing more than a general process of voice recognition. The detail of how voice recognition is performed can be found in most artificial intelligence literatures, and is well known to one having ordinary skill in the related art.

### ***Conclusion***

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Correspondence***

Art Unit: 2835

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yean-Hsi Chang whose telephone number is (571) 272-2038. The examiner can normally be reached on 07:30-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the Art Unit phone number is (571) 272-2800, ext. 35. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431 for regular communications and for After Final communications. There are RightFax numbers and provide the fax sender with an auto-reply fax verifying receipt by the USPTO: Before-Final (703-872-9318) and After-Final (703-872-9319).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8558.

Yean-Hsi Chang  
Patent Examiner  
Art Unit: 2835  
February 13, 2004

  
DARREN SCHUBERG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800